

How Could This Study Affect You?

The outcome of the El Rio WCMP will outline specific recommendations relative to flood protection and floodplain management strategies and accommodate recreational opportunities, and habitat preservation in the project area. This could affect you in a number of ways:

- 1. The El Rio WCMP will guide future development adjacent to the river.
- 2. Any drainage and flood control structures recommended in the plan may be considered for the District’s Capital Improvement Program or other funding sources. The end result could be the construction of new flood control facilities - such as levees or other structures.
- 3. The District’s goal is to provide a flood protection strategy that preserves the cultural and archaeological heritage of the river that is consistent with a long-term multi-use vision for the river corridor.

Your Input

This project is strongly supported by the Maricopa County Board of Supervisors, local municipalities, federal and state agencies, jurisdictions, and stakeholders.

It is important that the community stay involved in the process. Area residents have valuable experience and knowledge that could significantly influence the project’s success. We invite and encourage your support of this study. Please stay involved in the process by visiting our web site, talking to the study team about questions and concerns, and attending future public meetings. We anticipate the next series of public meeting for the El Rio WCMP will be held in Fall 2003.

For More Information

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For regular updates on the El Rio WCMP, visit the Flood Control District Web site at [www.fcd.maricopa.gov](http://www.fcd.maricopa.gov).

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Study Area Map

Data Collection Reports

How The Study Affects You

Contact Information

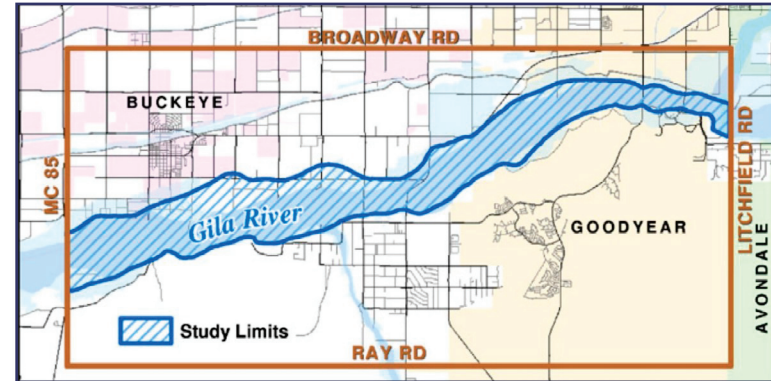




# El Rio Watercourse Master Plan

The Flood Control District of Maricopa County (District) began work on the El Rio Watercourse Master Plan (WCMP) in August, 2002. The study is a joint effort between the District, the City of Avondale, the Town of Buckeye, and the City of Goodyear. Project partners also include numerous state and federal agencies.

The goal for the El Rio WCMP is to provide a flood protection strategy that preserves the heritage of the river and is consistent with a long-term, multi-use vision for the river corridor.



## Data Collection

In April 2003, the study team completed the data collection phase of the El Rio WCMP. This included research of historical flooding, cultural resources, environmental surveys, recreational features, scenic resources, current land use plans, geomorphic data, and other data. A portion of the data collection effort has been summarized below.

## Engineering

**Flood Flows** - The Gila River basin is the largest in-state watershed in Arizona. In fact, the water that flows into the El Rio project area, drains from approximately 46,000 square miles of watershed. Over the last 100 years, the Gila River has experienced a number of floods resulting in damage to property along the river. Recent significant flooding events occurred in 1978, 1980, and 1993. If a 100-year flood event occurred in the El Rio study area, the flow would be approximately 220,000 cubic feet per second.

**Erosion Hazards** - Not all flood related damages along the Gila River are from inundation of water. In some areas, land or property was washed away in a flood event due to lateral erosion of the river channel. Lateral erosion is the loss of land caused by the sideways movement of the river.

## Water Availability

The El Rio project reach contains significant sources of water. These sources include surface water from precipitation, wastewater treatment plant discharges, agricultural irrigation drains, canal discharges and groundwater. Very distinctive to the El Rio stretch of the Gila River, is the presence of groundwater very near to the surface due to both natural features and human intervention. Because of the availability of water in the project area, the opportunity exists to create unique and multi-use alternatives.

## Environmental & Cultural Resources

Team members documented the most significant elements of three major resource areas - physical, wetland, and biological - so that the development of flood management alternatives can achieve a suitable balance between what are sometimes seen as competing issues and values.

Also evaluated was how present conditions differ from past conditions, and where potential opportunities exist to conserve, restore, or enhance natural conditions within the El Rio study area. The following are significant findings of the environmental team.

**Soil Types** - The presence of high concentration levels of salt and water quality contaminants in the soil deter the growth of native tree species such as cottonwoods and willows and may affect other flora and fauna.

**Water Quality** - The quality of the water, which is influenced both by nature and human activity, is suitable for limited uses. The water quality has had an impact on both the habitat and wildlife in the area and the project team will take this into consideration when developing alternatives. Restoration of riparian wetland habitat as part of a flood management strategy could have the effect of improving water quality.

**Wildlife & Unique Wildlife Areas** - Numerous species of wildlife inhabit the El Rio project area. Wildlife habitat areas include bird nesting or roosting areas, beaver lodges and dams, and burrows or dens. Two endangered species and one candidate species have potential to occupy the project area based on habitat preference but are not currently present in the project area. Within the project area, a variety of specific locations have the potential for habitat restoration, enhancement, or use as wildlife viewing and/or interpretive areas.



Cottonwood

**Vegetation & Plant Communities** - Thirteen vegetative cover types were identified in the El Rio project area. The project team will determine the feasibility of removing some of the lower-quality, invasive vegetation to create room for additional high-quality, native vegetation. Selective replacement of certain vegetation will enhance flood protection and could improve water quality and increase habitat in the region.



Beaver Lodge

**Vegetation & Plant Communities cont.** - Much of the project area contains dense vegetation and is dominated by Salt Cedar (Tamarisk). The consequence of this domination includes impacts to water supply, water quality, native vegetation, and could affect the flows of storm water. However, Salt Cedar provides some habitat for certain species of birds in the project area. The project team is evaluating a Salt Cedar management strategy as part of the alternatives formulation.

**Cultural Resource Sites** - Several important historic and prehistoric cultural themes were identified throughout the project area. These include canal irrigation, residential living, rock art production, and natural resource utilization. The El Rio project offers a valuable opportunity to preserve both the cultural and natural environment through responsible resource management.

## Land Uses

Property ownership in the project area includes large tracts of both public and private land. In order to formulate alternatives, the project team will incorporate the General Plans of Avondale, Buckeye, Goodyear, and Maricopa County, as well as recreation and transportation plans for the area.

